

Prior Art Rejection, 35 USC 103

Claims 11-21 stand rejected based on 35 USC 103 as obvious over Wolff et al '207. This ground of rejection is respectfully traversed.

In paragraph 4 of the Office Action, the Examiner queries concerning the evidence presented in the declaration of record (37 CFR 1.132) whether the results obtained are indeed unexpected and requests an explanation of why the results demonstrate the superiority of the invention.

It is clear from a consideration of Table 1 of the declaration that two products within the scope of the invention are described where product 1 is a combination of hexamethylene diisocyanate and cyclohexanol in a mole ratio of 20:1 and product 2 is a combination of hexamethylene diisocyanate and cyclohexanol in a mole ratio of 6-7:1, while the comparative product within the scope of the patent is a combination of hexamethylene diisocyanate and cyclohexanol in a mole ratio of 50:1. Each of these three products is then combined with a hydroxy acrylate (H 136) to prepare a composition that forms a hardened coating. Note importantly that a fourth composition is shown, as a point of reference, that is simply a combination of hexamethylene diisocyanate and the hydroxy acrylate.

In evaluating the results obtained, the comparative product within the scope of the patent must first be compared with the results obtained from the combination of hexamethylene diisocyanate and hydroxy acrylate. Here, it is abundantly clear that the hardness of the coating of the comparative product after 5 hr (14 pendulum swings) is actually less than the hardness of the coating of the hexamethylene diisocyanate/hydroxy acrylate combination (15 pendulum swings), and after ultimate hardness, the hardness of the comparative product is inferior at 137 pendulum swings compared to the hardness of the coating of the hexamethylene diisocyanate/hydroxy acrylate combination at 139 pendulum swings. Applicants therefore submit in light of this evidence that one of skill in the art would **not** expect that a reaction product of a diisocyanate (hexamethylene diisocyanate) with a cyclic alcohol such as cyclohexanol in any relative proportions would result in a product that exhibits increased hardness.

The finding of the present invention, on the other hand, is that when the ratio of diisocyanate to cyclic alcohol is **decreased** (content of alcohol is increased, see Products 1 and 2), surprisingly the further addition of cyclic alcohol does **not** result in a further decrease in hardness of a hardened product. Thus, at a ratio of 20:1, Product 1 exhibits the same hardness (15 pendulum swings after 5 hr) as that of the hexamethylene diisocyanate/hydroxy acrylate combination, but superior of the hardness of the comparative product within the scope of the patent. Moreover, at ultimate hardness, the hardness of Product 1 is much superior to the hardness of both the comparative product and that of the hexamethylene diisocyanate/hydroxy acrylate combination. As to the even lower ratio material of Product 2, although the hardness of the product after 5 hrs hardening is slightly inferior to all of the other products, nevertheless, after ultimate hardening, hardened Product exhibits the greatest hardening of all products at 145 pendulum swings. Applicants submit that it is clear that one of skill in the art, viewing the hardening results of the hexamethylene diisocyanate/hydroxy acrylate combination and the comparative product of Wolff, which has a ratio 50:1 that is positioned closer to the higher cyclic

alcohol content region of the disclosed 10 to 200:1 range of the patent, would **not** expect that combinations of a diisocyanate with a cyclic alcohol, especially combinations in which the amount of alcohol is increased relative to the diisocyanate, would result in hardened products of superior hardness. Accordingly, applicants maintain that the results presented in the Declaration (37 CFR 1.132) of record are supportive of patentability and withdrawal of the obviousness ground of rejection is respectfully requested.

Applicants continue to believe that the present application is in proper condition for allowance. Early notice to this effect is earnestly solicited.

Respectfully submitted,

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